

CLAIMS

What is claimed is:

1. In a multi-tier system that includes a back end server and one or more middle tier servers that obtain data from a database of the back end server, a method for deploying one or more data types in the system, the method comprising:

an act of creating a special table in the database of the back end server, the special table including one or more fields for storing data identifying data types and code for enabling use of the data types;

an act of identifying a data type to be deployed;

an act of obtaining an extended assembly that corresponds to the data type to be deployed, the extended assembly including the data from the special table identifying the data type and the code for enabling use of the data type; and

an act of transmitting the extended assembly to one or more middle tier servers in the multi-tier system.

2. A method as recited in claim 1, further including an act of creating logic modules in the one or more middle tier servers that enable utilization of the extended assembly.

3. A method as recited in claim 1, wherein the back end server includes a relational database.

4. A method as recited in claim 3, wherein the back end server comprises a Microsoft SQL Server.

5. A method as recited in claim 1, wherein the one or more middle tier servers includes an email server.

6. A method as recited in claim 5, wherein the email server is a Microsoft Exchange server.

7. A method as recited in claim 1, wherein the act of identifying the data type to be deployed includes determining that the one or more middle tier servers has requested or does not yet enable use of the data type.

8. A method as recited in claim 7, further including an act of adding a new middle tier server to the multi-tier system, and wherein the new middle tier server comprises the one or more middle tier servers that has requested or does not yet enable use of the data type.

9. A method as recited in claim 1, further including an act of creating one or more object tables that are linked to the special table and that include additional information defining the data type to be deployed, such that the extended assembly also includes the additional information.

10. In a multi-tier system that includes a back end server and one or more middle tier servers that obtain data from a database of the back end server, a method for deploying one or more data types in the system, the method comprising:

an act of modifying a special table in the database of the back end server, the special table including one or more fields for storing data that identifies data types and includes corresponding code for enabling use of the data types, the act of modifying including at least one of modifying the stored data and adding new stored data to the one or more fields;

an act of identifying a data type to be deployed;

an act of obtaining an extended assembly that corresponds to the data type to be deployed, the extended assembly including at least one of the modified stored data and the new stored data; and

an act of transmitting the extended assembly to one or more middle tier servers in the multi-tier system.

11. A method as recited in claim 10, further including an act of determining which of one or more middle tier servers should be sent the extended assembly.

12. A method as recited in claim 11, wherein the extended assembly enables use of the data type to be deployed at the one or more middle tier servers that have been determined to be sent the extended assembly.

13. A method as recited in claim 10, wherein the back end server includes a relational database.

14. A method as recited in claim 13, wherein the back end server comprises a Microsoft SQL Server.

15. A method as recited in claim 13, wherein the one or more middle tier servers includes an email server.

16. A method as recited in claim 10, wherein the act of modifying includes adding new stored data corresponding to a new data type not previously enabled in the multi-tier system prior to adding the new stored data.

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17. In a multi-tier system that includes a back end server and one or more middle tier servers that obtain data from a database of the back end server, a method for deploying one or more data types in the system, the method comprising:

an act of adding a new middle tier server to the multi-tier system, the new middle tier server being configured to utilize extended assemblies that are obtained from the back end server, the extended assemblies being configured to enable the use of one or more data types that are defined by data and enabled by code that is contained in the extended assemblies.

an act of determining which of the one or more data types are to be deployed from the back end server to the new middle tier server;

an act of obtaining one or more extended assemblies corresponding to the one or more data types that have been determined to be deployed, each of the one or more extended assemblies including data and code obtained from a special table stored in the database of the back end server; and

an act of transmitting, to the middle tier server, the one or more extended assemblies that correspond to the one or more data types that have been determined to be deployed.

18. A method as recited in claim 17, wherein the act of determining is based at least in part on the capabilities of the new middle tier server.

19. A method as recited in claim 17, wherein the act of determining is based at least in part on a request by the new middle tier servers for data to enable use of one or more data types.

20. A method as recited in claim 17, wherein the act of determining is based at least in part on a request by the new middle tier servers for data to enable use of one or more data types.

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21. In a multi-tier system that includes a back end server and one or more middle tier servers that obtain data from a database of the back end server, a method for deploying one or more data types in the system, the method comprising:

- an act of creating a special table in the database of the back end server, the special table including one or more fields for storing data identifying a data type and code for enabling use of the data type;
- a step for deploying the data type from the back end server to the one or more middle tier servers.

22. A method as recited in claim 21, wherein the step for deploying comprises corresponding acts that include:

- an act of identifying the data type to be deployed;
- an act of obtaining an extended assembly that corresponds to the data type to be deployed, the extended assembly including the data from the special table identifying the data type and the code for enabling use of the data type; and
- an act of transmitting the extended assembly to one or more middle tier servers in the multi-tier system.

23. A method as recited in claim 22, further including an act of creating logic in the one or more middle tier servers that enables utilization of the extended assembly.

24. A method as recited in claim 22, further including an act of creating at least one object table that includes at least some information defining the data type, and wherein the extended assembly includes the at least some information.

25. A computer program product for use in a multi-tier system that includes a back end server and one or more middle tier servers that obtain data from a database of the back end server, the computer program product including one or more computer-readable media having computer-executable instructions for implementing a method for deploying one or more data types in the system, the method comprising:

an act of creating a special table in the database of the back end server, the special table including one or more fields for storing data identifying data types and code for enabling use of the data types;

an act of identifying a data type to be deployed;

an act of obtaining an extended assembly that corresponds to the data type to be deployed, the extended assembly including the data from the special table identifying the data type and the code for enabling use of the data type; and

an act of transmitting the extended assembly to one or more middle tier servers in the multi-tier system.

26. A computer program product as recited in claim 25, wherein the method further includes an act of creating logic modules in the one or more middle tier servers that enable utilization of the extended assembly.

27. A computer program product as recited in claim 25, wherein the back end server includes a sequel server.

28. A computer program product as recited in claim 25, wherein the one or more middle tier servers includes an email server.

29. A computer program product as recited in claim 28, wherein the email server is a Microsoft Exchange server.

30. A computer program product as recited in claim 25, wherein the act of identifying the data type to be deployed includes determining that the one or more middle tier servers has requested or does not yet enable use of the data type.

31. A computer program product as recited in claim 25, wherein the method further includes an act of adding a new middle tier server to the multi-tier system, and wherein the new middle tier server comprises the one or more middle tier servers that has requested or does not yet enable use of the data type.

32. A computer program product as recited in claim 25, wherein the method further includes an act of creating one or more object tables that are linked to the special table and that include additional information defining the data type to be deployed, and wherein the extended assembly also includes the additional information.

33. A computer program product as recited in claim 25, wherein the method further includes modifying at least one of the special table and the one or more object tables.